

FEASIBILITY STUDY

A consensus process with a wide range of stakeholders to identify possible routes, environmental concerns, engineering constraints, construction costs and the economic feasibility of extending SR 504, the Mount St. Helens Highway, around the National Volcanic Monument connecting the east and the west sides

- * To improve economic development opportunities for the surrounding area
- * To improve resident and visitor access
- * To provide a new shorter emergency response route for medical and law enforcement
- * To provide an eastern emergency evacuation route
- * To provide time and fuel savings by eliminating the current dead-end access

There's a question about the Mount St. Helens area that needs to be carefully considered – and answered. On May 18, 1980, Mount St. Helens erupted, destroying 37 miles of State Route (SR) 504. Damage to Washington State highway facilities was estimated at over \$100 million. Work began immediately to reopen parts of the state highway for access to remaining inhabited areas of the Toutle River Valley and to salvage timber that was partially destroyed by the 1980 eruption. By the end of the following summer, Washington State Department of Transportation (WSDOT) had reopened 11 miles of the highway and replaced four bridges. A 110,000-acre area surrounding the volcano was designated as a National Volcanic Monument (NVM) by Congress to preserve and encourage the natural regeneration and provide an opportunity for scientific study, recreation and education.

The next 8.5 miles of SR 504 was completed in 1988, and the 22-mile section to Coldwater Ridge, where the US Forest Service (USFS) constructed the Coldwater Ridge Visitor Center, was completed in 1992. In 1997, WSDOT completed the last extension of SR 504, and the USFS opened the Johnston Ridge Observatory.

Several other agencies were involved in the reconstruction effort. The first visitor center, Mount St. Helens



Visitor Center at Silver Lake, was a joint county-state-federal project constructed by the USFS and then transferred to the Washington State Parks and Recreation Commission in 2000. Weyerhaeuser Company constructed the Forest Learning Center in partnership with WSDOT and the Rocky Mountain Elk Foundation – and Cowlitz County constructed the Hoffstadt Bluffs Visitor Center.

Interest in Mount St. Helens remains high, especially in the surrounding rural counties where residents want to improve economic development opportunities related to tourism.

Counties get funds for study of SR 504 extension

In 1999, Lewis County joined with Cowlitz, Skamania, Yakima and Clark counties to seek funding for a study to extend SR 504, the Mount St. Helens Highway. The Legislature approved state funding – and a grant was obtained from the USFS. WSDOT’s Transportation Economic Partnerships Office was asked to lead the study effort. The technical analysis was overseen by WSDOT Southwest Region (SWR) and conducted by HDR Engineering, Inc. Regional public involvement efforts were managed by Lewis County. Additional funding for public information was provided by a federal transportation discretionary grant.



Technical Advisory Committee (TAC)

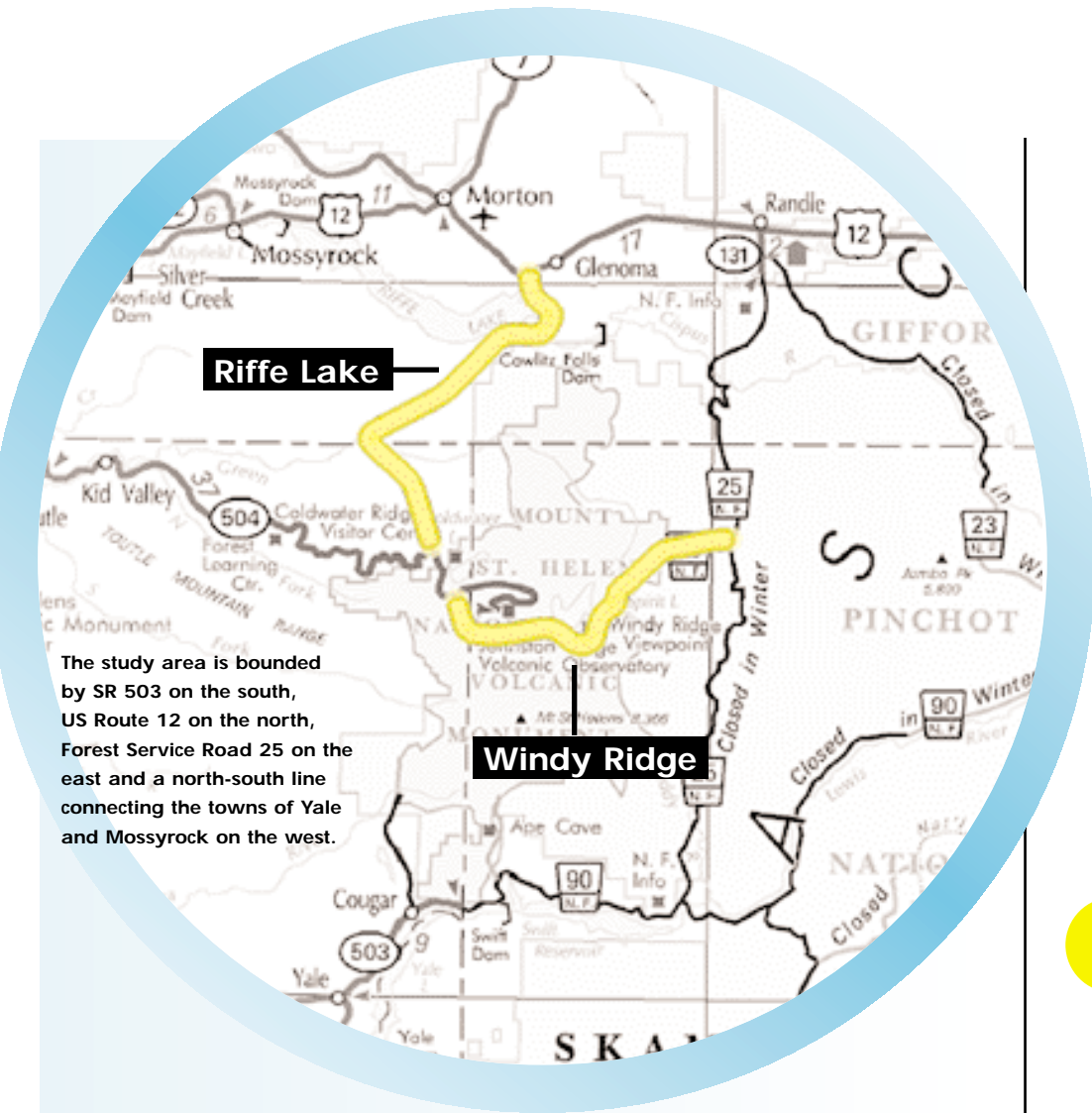
- * WSDOT Transportation Economic Partnerships Office
- * WSDOT SW Region
- * US Forest Service
- * US Geological Service
- * Weyerhaeuser
- * Southwest Washington Regional Transportation Planning Organization
- * Southwest Washington Regional Transportation Council

Public Involvement Committee (PIC)

- * Lewis, Cowlitz, Skamania, Yakima Counties
- * Cowlitz/Wahkiakum COG
- * City Governments
- * Congressional Staff
- * Legislators
- * USFS
- * USGS
- * US Army Corps of Engineers
- * FHWA
- * Washington State DCTED
- * Washington State DFW
- * Economic Development Councils
- * Chambers of Commerce
- * Tourism Organizations
- * Tribes
- * Environmental Organizations
- * Business and Industry
- * Land Owners
- * Law Enforcement Agencies
- * Private Citizens
- * Emergency Medical Services
- * Port Districts
- * Outdoor Recreation Groups

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Two routes are identified for further study

The Mount St. Helens feasibility study began by identifying 14 routes that could provide a wide range of connections to the north, east, and south of the existing SR 504 highway. Evaluation criteria were identified for environmental, engineering, and costs that were used to analyze all of the 14 alternative routes. This evaluation process was based upon existing or known information and expert opinion and only provided a determination as to whether an alternative had: (a) minimal impact/highest benefit; (b) moderate impact or benefit, or (c) major impact/least benefit on a resource relative to the other options.

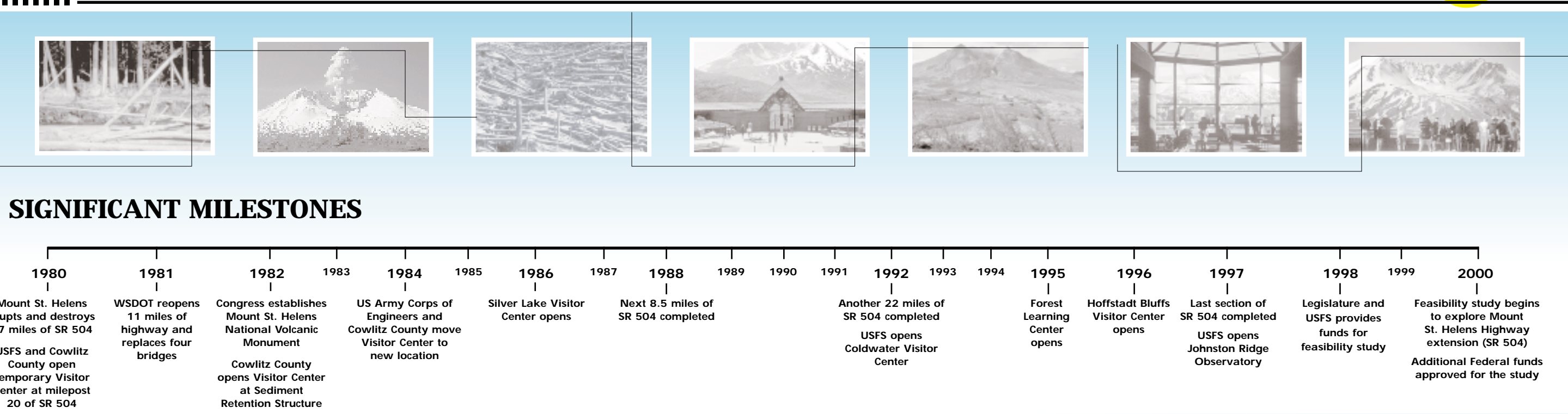
After the initial evaluation of the 14 routes, two were identified as corridors for a more detailed review and evaluation – the Riffe Lake Route and the Windy Ridge Route (See map).

Riffe Lake Route

Beginning on SR 504, approximately two miles west of the Coldwater Ridge Visitor Center, near the Maratta Creek crossing, this route extends to the north and northwest where it crosses the Green River. The route continues northeasterly to the southeastern corner of Riffe Lake where it crosses the Cowlitz River and continues around the eastern end of the lake. Continuing to the north along Riffe Lake on old Forest Service (FR) Road 27, this option ultimately ties into US 12 near Glenoma. This route contains approximately 17 miles of new roadway – and five miles of existing roadway.

Windy Ridge Route

Beginning on SR 504, near Hummocks Trailhead on the south side of Coldwater Lake, this route extends to the southeast approximately one mile south of Loowit Viewpoint. It then turns further in a southeasterly direction following part of old SR 504 and connecting to Windy Ridge. Then it follows FR 99 back to FR 25 at Wakepish. This route contains approximately seven miles of new roadway, and 15 miles of existing roadway.



Results of the evaluation of two routes summarized

The quantifiable results for the environmental and engineering criteria are summarized in the table to the right for the new sections of the two routes. It should be noted that this evaluation is based on preliminary data that were readily available and does not represent a definite impact evaluation of the two options. The evaluation was refined for these two options using the following parameters:

- * one-half-mile-wide corridors
- * design standards and operation and maintenance requirements for mountainous terrain

Environmental analysis

The feasibility study documents the existing conditions of all the natural resources potentially affected by an extension of SR 504 along the two selected routes. Potential effects could include habitat modification or loss resulting in species displacement; aquatic impacts from bridges and culverts; water quality concerns from roadway runoff; or conflicts with current land management.

The Riffe Lake Route could generate a moderate increase in noise levels from additional vehicles on US 12 outside the NVM. This route is located primarily in private ownership property and the ability to develop recreational areas is limited.

The Windy Ridge Route would require wildlife to cross a paved road to migrate from north to south around the mountain, but movement is limited due to lack of vegetative cover in the Pumice



Plain. Minor increases in noise levels could be expected from additional vehicles on FR 25 and at Iron Creek Campground. This option could provide additional recreation access to the north face of the mountain and the west side of Spirit Lake. This option would impact on-going scientific research that is being conducted within the NVM boundaries.

Traffic analysis

Direct access to the NVM is provided from the west by SR 504, from the east by FR 99 and from the south by SR 503 and FR 90. Connecting roadways to the areas surrounding the NVM include US 12 to the north and FR 25 to the east. Current and projected traffic volumes on all these routes were incorporated into the analysis. The current Level of Service on US 12 at SR 122 and SR 504 at Coldwater is not expected to change under either option in light of slightly higher traffic volumes. It is assumed that

both roads would be seasonal and open from May 1 through November 1, the same period that the Johnston Ridge Observatory is open.

Economic impact analysis

Using traffic analysis and expenditure patterns, the current economic patterns and trends in each of the surrounding counties was used as a baseline for predicting future economic trends. There is no actual data at the county level to indicate the level of visitor expenditures, but estimates have been made using national and regional models. The potential for increased tourism benefits in the area was assessed under a range of future traffic assumptions. The high range went from 55 to 71 additional jobs for each county.

Another measurement compares travel times with the capital costs and recognized operating and

maintenance standards and there is a positive net benefit from the Riffe Lake Option under a high traffic assumption for access to Randle and Cougar. The same conclusion was drawn for the low traffic assumption to Randle.

Alternative funding strategies explored

Funding an extension of SR 504 will require a financing plan that provides funds for both the construction and ongoing maintenance of the new route. Existing transportation resources have shrunk, while state transportation needs have grown. Extending SR 504 is not on any state or regional transportation funding plans. Therefore, it will be difficult for the project to compete for limited state highway funds. There are other priorities on the local, regional and state transportation systems. The study concludes that there were four basic alternative funding strategies:

- * Seek high priority or discretionary project funding from federal highway authorities
- * Form a special district and develop revenue sources from within the district. This may or may not include other state and federal resources
- * Invite the private sector to develop and operate the highway addition using toll financing augmented by other sources
- * Incorporate the project in an integrated transportation/ economic development plan that would allow private sector resources to be used

Evaluation results of Riffe Lake and Windy Ridge routes

Environmental criteria	Riffe Lake	Windy Ridge
Terrestrial wildlife resources and habitat		
Westside lowland conifer hardwood	3,600 acres	700 acres
Montane mixed conifer forest	1,400 acres	1,700 acres
Montane coniferous wetlands (Riparian areas) ¹	100 acres	0 acres
Priority deer habitat	2,000 acres	0 acres
Priority elk habitat	5,000 acres	2,000 acres
Terrestrial threatened & endangered species ²		
Potential lynx habitat	0 acres	0 acres
Potential wolf habitat	0 acres	700 acres
Potential grizzly bear habitat	0 acres	0 acres
Spotted owl habitat	0 acres	0 acres
Aquatic threatened and endangered species (streams with historic salmonid presence)		
	3 crossings	1 crossings
Stream alteration and riparian encroachment	7 crossings	3 crossings ³
Wetlands	200 acres	100 acres
Late successional reserves	0 acres	0 acres
Gifford Pinchot National Forest roadless areas	0 acres	0 acres
Riparian management under Forest and Fish Plan	100 acres	0 acres
Engineering criteria		
Length of new alignment	17 miles	7 miles
Capital cost	\$35 million	\$18.5 million
Operation & maintenance costs (Annual) (incl. existing road)	\$950,000	\$1.2 million
Travel time to Randle	47 minutes	81 minutes
Travel time to Cougar	159 minutes	116 minutes
Number of bridges	7	5
Right-of-Way		
USFS: Monument	0 miles	7 miles
USFS : Non-Monument	0 miles	0 miles
WDNR	1 miles	0 miles
Private	16 miles	0 miles
Topographic indicators		
Number of grades over 10%	4	1
Number of passes	1	1

¹ Adjacent to a river, stream or creek.
² No habitat data were available for state and private lands.
³ Because of the unstable nature of the Pumice Plain, there continues to be lateral migration of the North Fork of the Toutle River and its associated tributaries. Therefore, the number of stream crossings is difficult to quantify based on the half-mile corridor used for this analysis.

Public opinions vary on extending Mount St. Helen’s Highway

Hundreds of people either sent letters and e-mails or attended regional meetings to express their views about the project. In addition, a statewide telephone survey was conducted by the Social and Economic Sciences Research Center (SESRC) at Washington State University (WSU) to obtain further public opinions about the project. The ten-minute survey of 1,000 households was conducted in March and April, 2001 using a random digit dialing method. The random sample was stratified into three regions. The first region included phone numbers from all Washington State counties. The second region included phone numbers from Lewis, Cowlitz, Skamania, and Yakima counties. The final region included phone numbers from Clackamas, Multnomah, and Washington counties in Oregon.

Preliminary results from over 70% of the sample indicate that 60% of respondents have visited Mount St. Helens (MSH) since the eruption with the majority, or 57% going to the west side. The majority, 71%, go for sightseeing with another 12% going to learn more about the mountain. The vast majority of visitors, 79%, go to MSH on day trips.

MSH ranked higher than the Washington coast and Mt. Rainier with 27% indicating that they would plan to take friends or relatives from out of state to the volcano. About 50% indicated that they would plan to visit this year, 58% are likely to visit next year, and 64% sometime after 2002.

While 75% approve of extending SR 504, almost 68% felt that public access should continue to be limited with preserving the area as the main reason (43%) followed by protecting the environment (24%). Another 77% felt that more opportunities should be provided for recreational or educational opportunities and 60% felt that new access should be provided to areas that are currently not accessible.

The majority, 63% felt that extending the highway was justified to create new jobs in an area that has been affected by a declining timber industry, and 69% felt

Further environmental, engineering, economic and funding studies and more opportunities for public involvement will be needed before a final decision to build the project can be made.

that it was necessary to improve the response time for law enforcement and emergency medical services.

Just over half, 54%, indicated that the route extension would encourage them to visit MSH more often and 50% responded that they would likely stay longer.

While 56% felt that no public funds should be used to extend SR 504, there were 80% who felt that federal funds available to National Parks and Monuments should be used followed by 75% who favor having the users pay for it. Another 63% felt that the U.S. Congress should approve new federal funds. Respondents felt strongly that no state funding should be used, and they did not want to take existing funds from other transportation projects.

The majority of respondents, 71%, would be willing to pay an entrance fee, with 35% willing to pay \$10 per vehicle, and 52% willing to pay \$5 per vehicle.

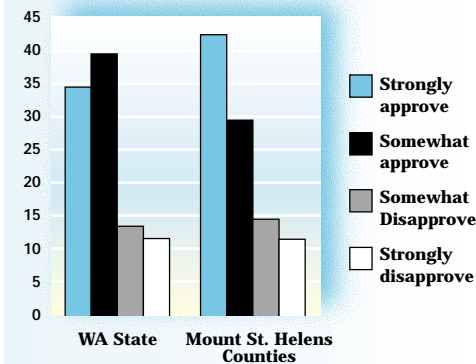
What happens next?

This study has provided an initial examination of the environmental, engineering, economic and financial questions involved with extending SR 504. The study requested by the counties surrounding Mount St. Helens is intended to provide a snapshot of some of the issues that surround the route extension.

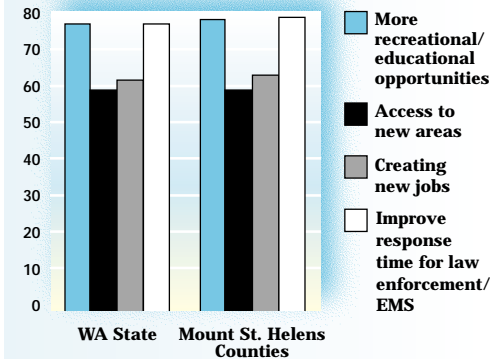
The next step depends on the interest and support of the affected local communities, state lawmakers and the congressional delegation as to whether further work will proceed on the project. Further environmental, engineering, economic and funding studies and more opportunities for public involvement will be needed before a final decision to build the project can be made.

The information contained here was provided by the consultant and the SESRC at WSU and does not reflect the views of WSDOT or its employees.

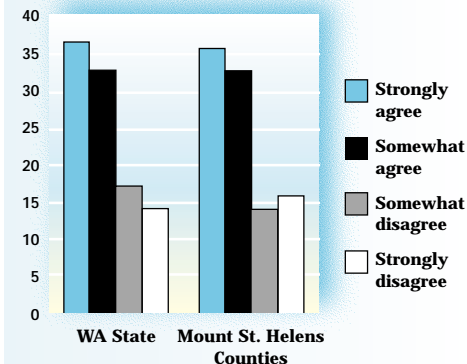
Do you approve/disapprove of extending SR 504?



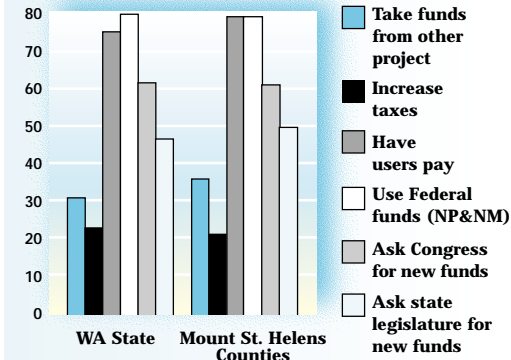
Why should SR 504 be extended?



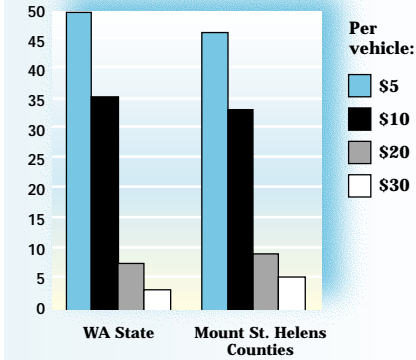
Should public access continue to be limited?



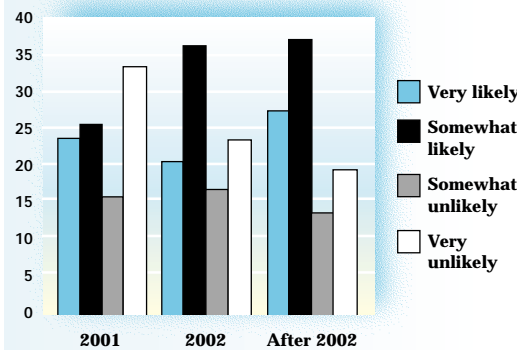
How should an extension be paid for?



What is the highest entrance fee you would be willing to pay?



How likely are you to visit Mount St. Helens?



Mount St. Helens Highway Extension FEASIBILITY STUDY

FOR MORE INFORMATION, CHECK OUT:
www.wsdot.wa.gov/projects/SR504/
Washington State Department of Transportation

Transportation Economic Partnerships Office 360-664-2910
SW Region Corridor Planning Studies 360-905-2055

Local residents can contact their Board of Commissioners

Lewis County: 360-740-1120
Skamania County: 509-427-9447
Cowlitz County: 360-577-3020
Yakima County: 509-574-1500